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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,811	02/25/2004	Shiying Zheng	85463RLO	3343
7590 Pamela R. Crocker Patent Legal Staff Eastman Kodak Company 343 State Street Rochester, NY 14650-2201			EXAMINER GARRETT, DAWN L	
			ART UNIT 1774	PAPER NUMBER
			MAIL DATE 05/17/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/786,811

Applicant(s)

ZHENG ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 6-8 is/are rejected.
- 7) ☒ Claim(s) 3-5 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 27, 2007 has been entered.
2. The amendment filed April 12, 2007 has been entered. Claims 1, 3, and 6 were amended. Claim 10 is canceled. The current species is formula I wherein Z is NR'. With regard to formula III in claim 3, the examiner has previously found the polymer of formula III in an EL device wherein Z is NR' in formula I (according to the present species under consideration) to be allowable subject matter. Claims 3-5 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims if limited to the present species under consideration.
3. The rejection of claims 1, 2, 6, and 7 under 35 U.S.C. 102(b) as being anticipated by Okada et al. (JP 2000-089027) is withdrawn due to the amendment.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

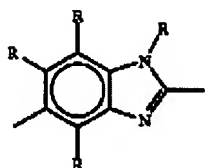
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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikehira et al. (US 2002/0193532 A1). Ikehira et al. teaches conjugated polymers for the light emitting substance of an EL device (see par. 9). Ikehira et al. sets forth the following repeating unit for a polymer (see par. 40):



In the formula  $\text{Ar}_1$  means a divalent heterocyclic compound group (see par. 48). Ikehira et al. exemplifies the following  $\text{Ar}_1$  heterocyclic compound group of a polymer with regard to formula I (see page 17, number 103):



With regard to claims 2 and 7, the material is used in a light emitting layer of a device (see claim 27, page 37). An additional light emitting material is mixed in the polymer light emitting layer with regard to claim 8 (see par. 225).

### *Response to Arguments*

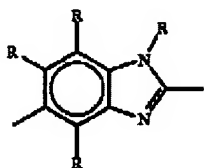
6. Applicant's arguments filed April 27, 2007 have been fully considered but they are not persuasive.

With regard to the rejection over Ikehira et al., applicant argues "Ikehira et al. teaches the use of metal complex polymers in OLED devices in emissive layers as triplet emitters. The

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azole groups as shown in structures 103 and 105 of Ikehira et al. are cited only as examples of suitable ligands as part of metal containing polymers. Ikehira et al. does not teach the use of non-metal containing polymers for use in OLED devices as set forth in the claims in the present application.” In response, the examiner submits the present claims do not exclude a metal complex component from being present in the polymer. Furthermore, Ikehira et al. teaches a conjugated backbone repeating unit according to the formula shown at par. 40:

$-\text{Ar}_1 - (\text{CR}_1 = \text{CR}_2)_n -$ . General formula (1) is a repeating unit used in conjunction with a repeating unit having a metal complex structure (see par. 40). The heterocyclic group



is taught as an  $\text{Ar}_1$  group of repeating unit formula 1 (par. 40) (see par. 49, 52-59 for teaching of heterocyclic  $\text{Ar}_1$  groups for the formula 1 repeating unit).

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dawn Garrett  
Primary Examiner  
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